

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S4	4	(transmit\$4 and receiv \$4 pulse\$1 with contrast microbubble \$1) and (suppress\$4 pulse\$1 and fundamental wave\$1 and second order harmonic\$1) and (pulse \$1 amplifier\$1 and amplitude\$1 MPa)	US-PGPUB; USPAT	AND	OFF	2008/12/16 13:55
S5	7	(transmit\$4 and receiv \$4 pulse\$1 and contrast microbubble \$1) and (suppress\$4 pulse\$1 and fundamental wave\$1 and second order harmonic\$1) and (pulse \$1 amplifier\$1 and amplitude\$1 MPa)	US-PGPUB; USPAT	AND	OFF	2008/12/16 15:45
S6	169	(waveform\$1 and contrast microbubble \$1) and (summ\$4 fundamental wave\$1 and second order harmonic\$1) and (display\$4 fundamental amplitude \$1)	US-PGPUB; USPAT	AND	OFF	2008/12/16 16:08
S7	5	(waveform\$1 and contrast microbubble \$1) and (summ\$4 fundamental wave\$1 and second order harmonic\$1) and (display\$4 fundamental amplitude \$1 S5 MPa)	US-PGPUB; USPAT	AND	OFF	2008/12/16 16:09
S8	0	(pulse\$1 with contrast microbubble\$1) and (display\$4 fundamental amplitude \$1 and first cesond third order harmonic \$4)	US-PGPUB; USPAT	AND	OFF	2008/12/16 17:12

S9	123	(pulse\$1 with contrast microbubble\$1) and (display\$4 fundamental amplitude \$1 and first second third order harmonic \$4)	US-PGPUB; USPAT	AND	OFF	2008/12/16 17:12
S10	0	display\$ amplitude\$1 and first order harmonic\$1 and second order harmonic \$1	US-PGPUB; USPAT	ADJ	OFF	2008/12/16 17:30
S11	0	display\$ amplitude\$1 and third order harmonic\$1 and second order harmonic \$1	US-PGPUB; USPAT	ADJ	OFF	2008/12/16 17:31
S12	1	display\$ amplitude\$1 and second order harmonic\$1	US-PGPUB; USPAT	ADJ	OFF	2008/12/16 17:31
S13	0	(signal amplitude and sound pressure) and ( zero "0" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:12
S14	1	(signal amplitude\$1 and zero "0" degree pulse and "180" degree pulse\$1 and summ\$5 signal\$1)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:13
S15	0	(signal amplitude\$1 and zero degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (hamonic\$1 filter\$5)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:15
S16	0	(amplitude\$1 and "120" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (hamonic\$1 filter\$5)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:15
S17	0	(amplitude\$1 and "120" degree pulse and "180" degree pulse \$1) and (hamonic\$1 filter\$5)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:15

S18	0	(amplitude\$1 and "120" degree pulse and "180" degree pulse \$1) and (harmonic\$1 filter\$5)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:15
S19	2566	(amplitude\$1 and "120" degree pulse and "180" degree pulse \$1) and (harmonic\$1 filter\$5)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:15
S20	2404	(amplitude\$1 and "120" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (harmonic\$1 filter\$5)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:16
S21	34	(amplitude\$1 and "120" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (harmonic\$1 filter\$5) and (contrast imag\$4 microbubble \$1)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:17
S22	30	(amplitude\$1 and "120" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (fundamental wave\$1 and second and first order harmonic\$1 ) and (contrast imag\$4 microbubble\$1)	US-PGPUB; USPAT	AND	OFF	2008/12/16 19:19
S23	1656	600/437.ccls. and (amplitude\$1 and "120" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (fundamental wave\$1 and second and first order harmonic\$1 ) and (contrast imag\$4 microbubble\$1)	US-PGPUB; USPAT	OR	OFF	2008/12/17 21:59

S24	469	600/458.ccls. and (amplitude\$1 and "120" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (fundamental wave\$1 and second and first order harmonic\$1 ) and (contrast imag\$4 microbubble\$1)	US-PGPUB; USPAT	OR	OFF	2008/12/17 22:00
S25	327	600/454.ccls. and (amplitude\$1 and "120" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (fundamental wave\$1 and second and first order harmonic\$1 ) and (contrast imag\$4 microbubble\$1)	US-PGPUB; USPAT	OR	OFF	2008/12/17 22:00
S26	37	600/465.ccls. and (amplitude\$1 and "120" degree pulse and "180" degree pulse \$1 and summ\$5 signal \$1) and (fundamental wave\$1 and second and first order harmonic\$1 ) and (contrast imag\$4 microbubble\$1)	US-PGPUB; USPAT	OR	OFF	2008/12/17 22:00
S27	43	"6095980"	US-PGPUB; USPAT	OR	OFF	2009/08/30 16:00
S28	1	"20020188199"	US-PGPUB; USPAT	OR	OFF	2009/08/30 16:03
S29	10	"5517996"	US-PGPUB; USPAT	OR	OFF	2009/08/30 16:04
S30	5877517	transmit\$4 beamform \$4 and receiv\$4 beamform\$4 and add \$4 sum\$4 echo signal \$1 with transmit receiv \$4 control\$4 and envelop\$3 signal\$1 and var\$4 phas\$4 with "360" degre\$2	US-PGPUB; USPAT	OR	OFF	2009/08/30 16:08

S31	11	transmit\$4 beamform \$4 and receiv\$4 beamform\$4 and add \$4 sum\$4 echo signal \$1 with transmit receiv \$4 control\$4 and envelop\$3 signal\$1 and phas\$4 with "360" degre\$2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2009/08/30 16:10
S32	7	transmit\$4 beamform \$4 and receiv\$4 beamform\$4 and add \$4 sum\$4 echo signal \$1 with transmit receiv \$4 control\$4 and envelop\$3 signal\$1 and phas\$4 with "360" degre\$2 and microbub \$5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2009/08/30 16:19
S33	49	((TAKASHI) near2 (AZUMA)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/08/30 22:05
S34	0	transmit\$4 receiv\$4 and imag\$1 microbubble\$1 contrast \$1 and sum\$4 signal\$1 and control\$4 carrier wave\$s with vary\$4 phase\$3 angle\$1	US-PGPUB; USPAT	AND	OFF	2010/03/24 17:59
S35	11	transmit\$4 receiv\$4 and imag\$1 microbubble\$1 contrast \$1 and sum\$4 signal\$1 and control\$4 carrier wave\$s with vary\$4 phase\$3 angle\$1	US-PGPUB; USPAT	AND	OFF	2010/03/24 17:59
S36	8	transmit\$4 receiv\$4 and imag\$1 microbubble\$1 contrast \$1 and sum\$4 signal\$1 and control\$4 carrier wave\$1 with vary\$4 phase\$1 angle\$1	US-PGPUB; USPAT	AND	OFF	2010/03/24 17:59
S37	4	"600".clas. and transmit \$4 receiv\$4 and imag \$1 microbubble\$1 contrast\$1 and sum\$4 signal\$1 and control\$4 carrier wave\$1 with vary\$4 phase\$1 angle \$1	US-PGPUB; USPAT	AND	OFF	2010/08/31 14:38

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